2005 in Review for central Kentucky and south-central Indiana

By John Denman, Forecaster

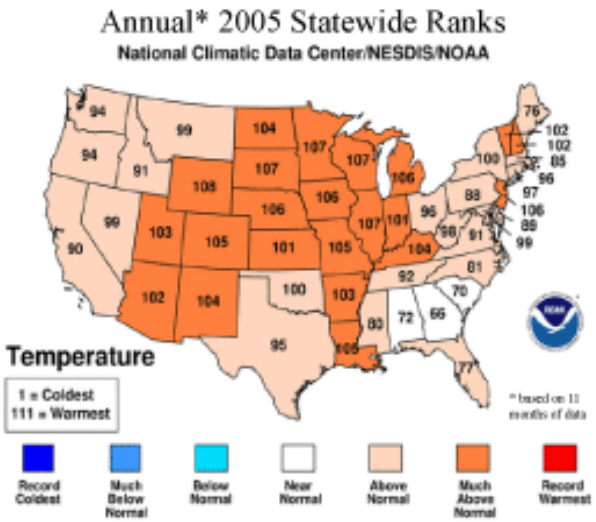
The tables below summarizes precipitation, snowfall totals, and extreme temperatures in 2005 for Louisville (Weather Service Office), Lexington, and Bowling Green. Also included as a comparison…are data from 2004.

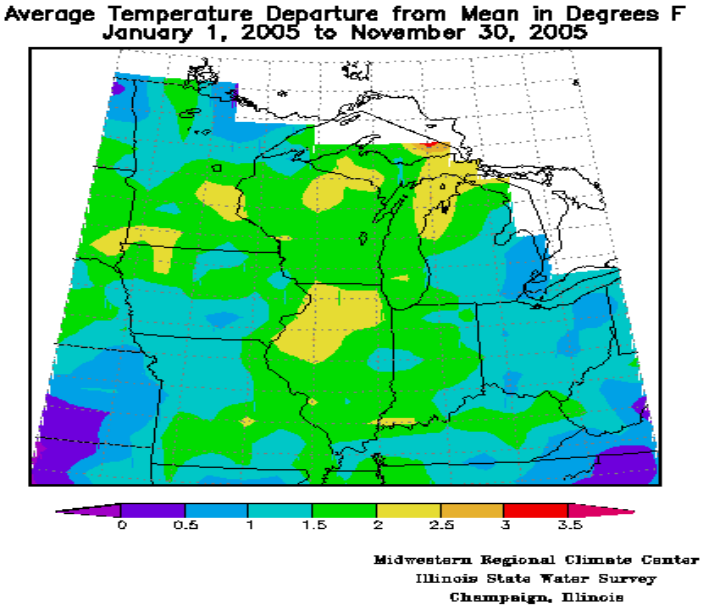
	Louisville	**Lexington**	**Bowling Green**
2005 Total precipitation	40.76 inches	33.51 inches	40.07 inches
2004 Total precipitation	65.41 inches	62.36 inches	54.62 inches
Normal precipitation	44.50 inches	45.91 inches	51.63 inches
2005 Departure from normal	- 3.74 inches	- 12.40 inches	-11.56 inches

Total snowfall for 2005	9.0 inches	6.0 inches	0.1 inches
Total Snowfall for 2004	15.0 inches	5.0 inches	4.0 inches
Normal Snowfall	14.6 inches	15.7 inches	10.2 inches
2005 Departure from Normal	-5.6 inches	-9.7 inches	-10.1 inches

	Louisville	**Lexington**	**Bowling Green**
Highest Temperature 2005	98 (Aug 13)	98 (Aug 12)	99(Aug 11)
Highest Temperature 2004	92 (Aug 19)	89 (Aug 19)	92 (July 13)
Lowest Temperature 2005	7 (Jan 18th	6 (Jan 18,23)	10 (Dec 20)
Lowest Temperature 2004	- 5 (Jan 31)	- 6 (Jan 31)	+ 6 (Jan 31)
Greatest 24-hr Rainfall 2005	3.08 (Aug 30)	2.07 Aug (30-31)	4.39 (Aug29-30)
Greatest 24-hr Rainfall 2004	5.07 (Oct 18)	3.73 (July30-31)	2.53 (May25-26)
Highest Wind Gust 2005	53 (Aug 5)	54 mph (Nov 28)	52 mph (28 Nov)
Highest Wind Gust 2004	64 mph (July 13)	46 mph (27 May)	46 mph (13 July)

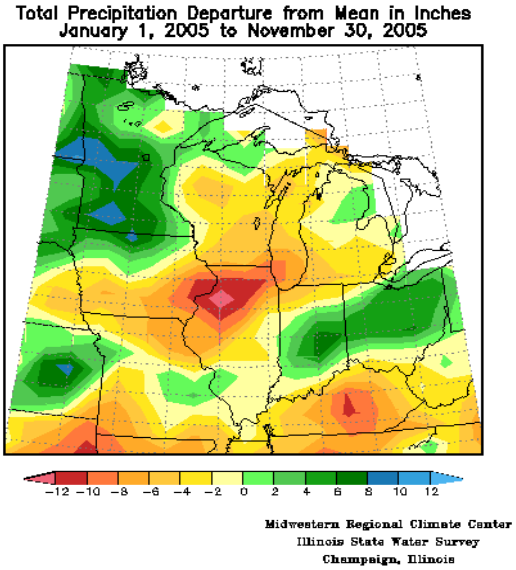
2005 was quite warm across central Kentucky and southern Indiana. As the map below shows…January through November of 2005 ranked the 104th warmest out of a possible 111 years for Kentucky as a whole. For Indiana, this last year ranked the 101st warmest.





The map on the left shows the average temperature departure from the mean for the Midwest. This year's greatest temperature anomalies centered across the western Great Lakes…but temperature averaged one to two degrees above normal across Kentucky and southern Indiana.

2005 was also considerably drier than last year, when ample rains lead to a record wet year in some locations. Over the entire year, the greatest rainfall deficits accumulated across eastern Kentucky, the Bluegrass region, and parts of the south. In fact, for the Lexington Airport, the 33.52 inches of rainfall recorded these past 12 months made 2005 the 9th driest year on record. This was the driest year in Lexington since 1999, when only 31.97 inches were recorded. The first map below shows rainfall deficits for all of 2005…through the month of November. Precipitation deficits approached 12 inches across the southern Bluegrass region. The map on the right shows that for the state as a whole, through the month of November, 2005 was the 19th driest during a 111 year record.



Winter season….January and February

Temperatures Compared to Normal			Total Snowfall	
	January	February	January	February
Louisville	+4.0 deg	+2.3 deg	2.5 in	1.2 in
Lexington	+5.5 deg	+3.2 deg	2.3 in	0.4
Bowling Green	+7.1 deg	+3.7 deg	T	T

Spring season…..March, April and May

The spring of 2005 proved slightly cooler than normal…with a relative lack of severe weather. Our forecast area of central Kentucky and southern Indiana recorded only two tornadoes. Both tornadoes were rated as F-0. The first occurred March 19 in eastern Spencer County near Brier Ridge. With winds estimated near 70 mph, it damaged a general store and a parsonage. The second tornado is shown below. It occurred April 22, just south of Slugger field. This weak circulation touched down at the intersection of Campbell and Market streets, where it flipped over an empty trailer and damaged the roof of a stockyard company.

Temperatures Compared to Normal

	March	April	May
Louisville	-5.2 deg	+0.7 deg	-3.3 deg
Lexington	-5.0 deg	+1.7 deg	-2.3 deg
Bowling Green	-3.2 deg	+0.7 deg	-2.6 deg

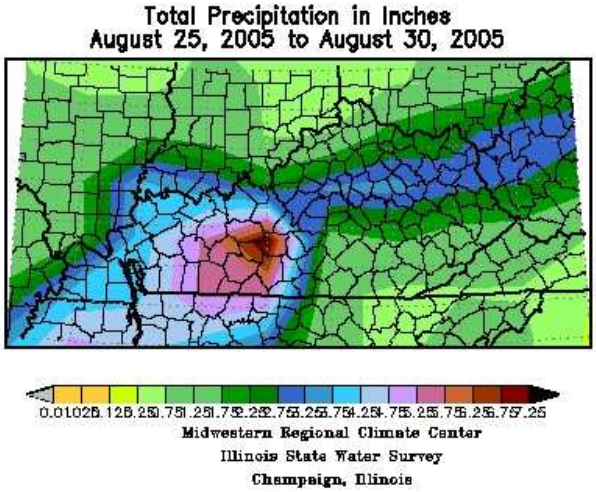
Total Precipitation

	March	April	May
Louisville	3.90 in	3.51 in	4.56 in
Lexington	3.49 in	3.47 in	2.64 in
Bowling Green	3.52 in	5.80 in	2.45 in

Summer season….June, July, and August

	Temperatures Compared to Normal			Total Precipitation		
	June	July	August	June	July	August
Louisville	+0.9 deg	- 0.9 deg	+1.8 deg	1.87 in	3.25in	7.04 in
Lexington	+2.7 deg	+1.7 deg	+3.7 deg	2.28 in	3.05 in	6.10 in
Bowling Green	+0.8 deg	+0.4 deg	+2.9deg	1.87 in	4.40in	8.36 in

This summer contrasted greatly with that of 2004. Temperatures were somewhat warmer than normal. Rainfall was sporadic; except for a very wet week in late August associated with the remnants of hurricane Katrina. The map below shows rainfall totals associated with the remains of Katrina. Over one half of Bowling Green's summer rain (over 7 inches) fell during this 6 day period in late August. Rainfall amounts of around 4 inches also fell across Lexington and Louisville. In addition, in early July, the remnants of hurricane Dennis brought 1 to 3 inches of rain, as well as cool daytime highs in the mid 70s. Hurricanes played a greater role in our precipitation totals this summer than in the vast majority of past years.



Fall season…September, October, and November

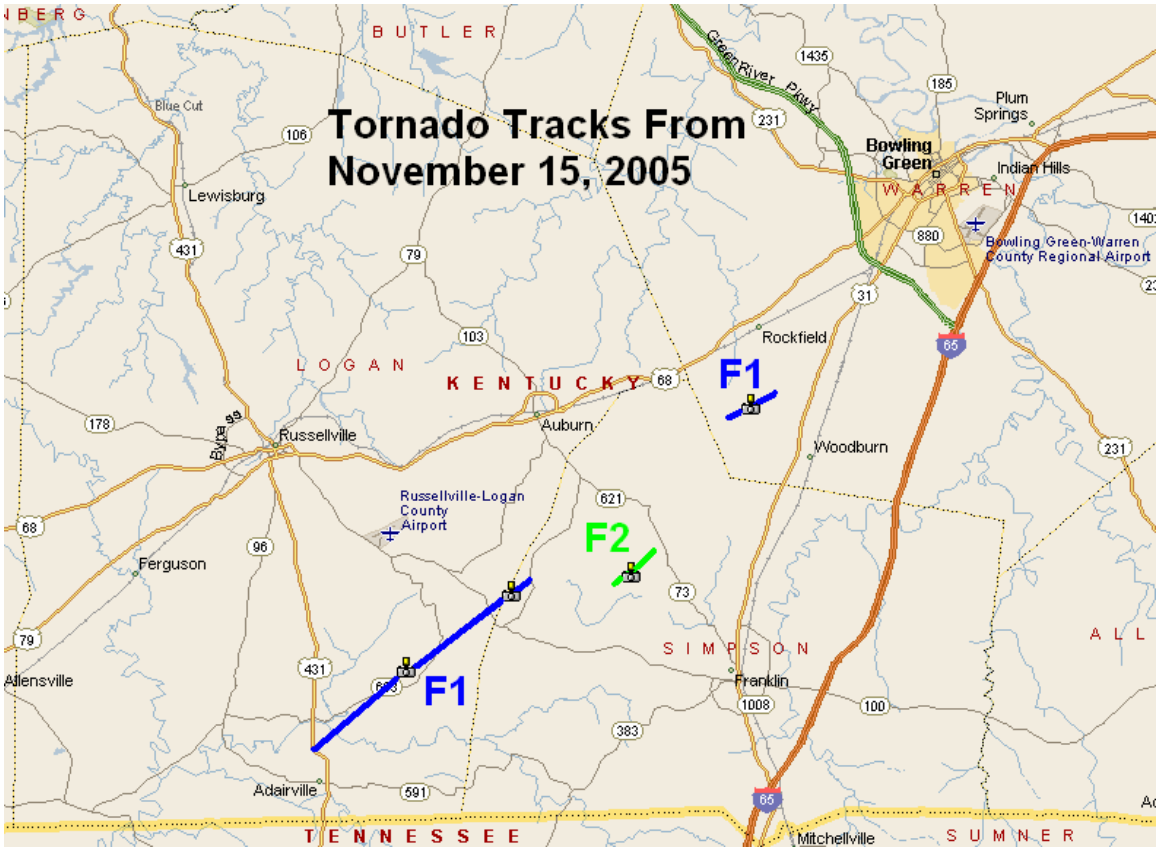
Temperatures Compared to Normal				Total Precipitation		
	September	October	November	Sept	Oct	Nov
Louisville	+1.7 deg	+0.3 deg	+0.2 deg	1.90 in	1.25 in	3.41 in
Lexington	+3.7 deg	+1.4 deg	+1.2 deg	0.89 in	0.93 in	1.77 in
Bowling Green	+2.7 deg	+1.0 deg	+1.4 deg	0.48 in	0.28 in	3.01 in

September and October were exceeding dry. Note the rankings in the chart below. The only drier period for Lexington and Bowling Green was September and October of 1963, when only 0.70 and 0.34 inches of rain fell respectively.

City	Sept – Oct rainfall	Normal Sept – Oct rainfall	Departure from normal	Rank since records began
Louisville NWS office	3.15 in	5.84 in	-2.69 in	4th driest
Lexington	1.82 in	5.91 in	-4.09 in	2nd driest
Bowling Green	0.76 in	7.30 in	-6.54 in	2nd driest

Several severe weather episodes in November brought additional tornados to central Kentucky, capping the number of tornados for 2005 at 6. The strongest tornado of the year struck Munfordville during the early morning hours of November 6th. This rated a strong F-2 and had a path length of 1 mile and a maximum width of 200 yards. This tornado significantly damaged downtown Munfordville. The picture below shows some of the damage with this tornado.

A second outbreak of severe weather brought 3 additional tornados to the Bowling Green area on Nov 15th. The map below shows the paths and strengths of these three tornados, which came from the same supercell.



December of 2005

This past month started out quite cold. For both Lexington and Louisville, the first 22 days of the month had average temperatures at or below normal. The table below shows temperature and precipitation statistics for December.

	Average temp	Departure from normal	Precipitation	Departure from normal
Louisville	32.4	-5.2	2.24	-1.45
Lexington	32.4	-3.9	2.40	-1.63
Bowling Green	35.0	-3.3	2.02	-3.04